





SHORT SEASONAL ABSENCE OF LONG-FINNED PILOT WHALES IN THE STRAIT OF GIBRALTAR

Ezequiel Andréu, (1,2), Baldomero Medina, (1), Pierre Gallego, (3) and Juan Lucas Cervera (1)

(1) Departamento de Biología, Facultad de Ciencias del Mar y Ambientales, Universidad de Cádiz, Poligono del Río San Pedro, s/n, Apdo. 40, 11510 Puerto Real (Cádiz), Spain; (2) Turmares Tarifa, Alcalde Juan Núñez, S/N, 11380, Tarifa (Cádiz), Spain (3) National Museum of Natural History (NMNH), rue Münster 25, L-2160 Luxembourg;

INTRODUCTION

Long-finned pilot whales (Globicephala melas) are resident in the Strait of Gibraltar. Because of their predictable presence and distribution, they account for most of the sightings and represent the main target for whale-watching operators. The total population of resident pilot whales has been estimated to about 300 individuals. Nevertheless, these groups have been reported to disappear for one or two weeks each spring/summer, causing certain stress among whale-watching operators.

METHODOLOGY

Our research took place in the Strait of Gibraltar from an opportunistic platform of whale watching, from May to October 2003 through 2006. This project consisted in opportunistic sightings from the "Jackelin" whale watching boat. We selectively collected scientific data, e.g. Beaufort sea state, wind strength and direction, group composition and behaviour, etc.

RESULTS AND DISCUSSION

We observed that the pilot whales were absent during certain periods of time each season; the exact dates are listed in table 1. Although newborns are present throughout the entire sighting season, a peak of neonates has been observed just after the pilot whales return from their absence. The Strait of Gibraltar has very strong currents and winds, During most sightings in which pilot whales are travelling, they are doing so heading West, i.e. swimming against the Atlantic inflow trying to stay at the same location, which is the area they also feed in. The Strait of Gibraltar is also the second busiest shipping route in the world. Additionally, interactions between long-finned pilot whales and killer whales (Orcinus orca) in the Strait of Gibraltar have recently been described, the former chasing the latter. The period during which long-finned pilot whales disappeared in 2003 and 2004 coincided with the apparition of killer whales in the Strait of Gibraltar, but it did not coincide in later seasons (cf. Table 1). Nevertheless, no predation of orcas on pilot whales has ever been witnessed in the area.

CONCLUSIONS

We postulate that the majority, or the totality of the long-finned pilot whale population moves from the Strait of Gibraltar to calmer and safer waters of the Alboran Sea during this time to give birth. The reason for this is probably multifactorial, but the dates seem to coincide mostly with the apparition of orcas in the Strait.

ACKNOWLEDGMENTS

The research was supported by Turmares S.L. whale watching company. We extend our thanks to National Museum of Natural History of Luxembourg. We also thank Cadiship, Eléctrica de Cádiz, Inachus and the department of biology of university of Cadiz for their collaboration with this project.

REFERENCES

- Cañadas A, Sagarminaga R, (2000) the Northeastern Alboran Sea, an important breeding and feeding ground for the long-finned pilot whale (Globicephala melas) in the Mediterranean Sea. Marine Mammal
- Olson PA, Reilly SB, (2002) Pilot whales Globicephala melas y G. Macrorhynchus. In: Encyclopedia of marine mammals (Perrin WF, Würsing B, Thewissen JGM, eds.) Academic Press, San Diego, 898-903.
- Learmonth, J.A. (2006) Potential effects of climate change on marine mammals. Oceanography and Marine Biology: An Anual Review, 44, 431-464
- Abend, A. Smith T. (1999) NOAA Technical Memorandum NMFS-NE-117





Figure 1: The Jackelin, the platform of opportunity from which most of our sightings took place.

Year	Absence of pilot whales	Arrival of orcas
2003	10-17 August	14 August
2004	02-08 July	19 July
2005	22-26 July	26 June
2006	09-23 June	25 June

Table 1: Comparison of the dates in which the pilot whales disappear witht the periods in which the orcas are in the Strait of Gibraltar. The latter correspond to the dates in which the orcas are present during several days, as they sometimes just visit the area to check for tuna presence.



